

CULTURAL DIVERSITY AND TEAM PERFORMANCE:  
ASSESSING MAJOR LEAGUE SOCCER'S RELATIONSHIP WITH IMPORTED  
TALENT

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By

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CULTURAL DIVERSITY AND TEAM PERFORMANCE:  
ASSESSING MAJOR LEAGUE SOCCER'S RELATIONSHIP WITH IMPORTED  
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Economics

**Abstract**

This paper uses data from Major League Soccer's regular season between 2012 and 2016 to study the impact of cultural diversity on team performance. I found that there is no proof that more diverse teams outperform less diverse ones or vice versa. However, I did find that more valuable teams, teams that spend a relatively large amount of the league's total spend on salary, outperform less valuable ones. All else equal, a one percent increase in a team's value is associated with a 0.94 increase in its end of season goal differential. An Ordinary Least Squares Regression (OLS) reinforces these findings. Because goal difference totals often mirror league standings, teams that spend more money could potentially change their final position in the conference at the end of the season. The results of this study have important implications for debates regarding money's ability to influence performance not only in more financially equitable soccer leagues, but also in leagues where there is greater financial inequality between teams.

KEYWORDS: (Team Performance, Diversity, Language, Soccer, Major League Soccer)  
JEL CODES: (M14, M51, M54, Z20)

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED  
UNAUTHORIZED AID ON THIS THESIS

A handwritten signature in black ink that reads "Tim Huettel". The signature is written in a cursive style with a large initial 'T' and 'H'.

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Signature

### **Acknowledgements**

The completion of this thesis would not have been possible without the guidance of my advisor Christina Rader. I would like to thank her for her insight, constant support, and readiness to help me work around the obstacles that I faced. I would also like to thank my parents, Rich Huettel and Sue Harrold, for their encouragement and ideas throughout this process. Finally, I would like to thank my brother, Ryan Huettel, for his expertise on Major League Soccer and his observations on team management.

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## 1. Introduction

When an American company brings in hundreds of foreign workers, a large population of the country is bound come to the defense of domestic labor. Critics of this company may say that foreigners are less productive than their American counterparts or that Americans should come first for employment. On the other hand, many argue that the free movement of people, as well as goods, services, and capital, is the key to growth, which according to them is inherently good (Kommerskollegium, 2015). From a corporate perspective this creates an interesting tradeoff for an organization because they are focused solely on their own best interests, but also fear repercussions from the American government and public.

Although it may not draw as much ire or as many repercussions, when this debate involves highly-skilled labor the arguments are fairly similar. However, in the case of highly-skilled labor, Americans and foreign workers generally have different sets of knowledge and skills, which is what draws organizations to foreign labor in the first place (Alvarez *et al.*, 2011). This is why employers explore different balances in labor in order to maximize their organization's performance.

The argument for domestic employment typically comes from either competing workers or nationalists, while the argument for the free movement of labor is usually made by corporations or those loyal to the free market (Alvarez *et al.*, 2011). What this debate often boils down to is the argument between generating *growth* (profit) versus generating *domestic employment* (Alvarez *et al.*, 2011). An almost identical debate exists right now, but in the realm of Major League Soccer (MLS), U.S. Soccer's top domestic league. Many of the nationalist and free market arguments be seen reflected in this

debate, but instead of growth and domestic employment the terms league development and player development are used. In this context, the MLS is the American company bringing in foreign workers (players), and the fans and U.S. Soccer Federation are the ones in charge of keeping them in check<sup>1</sup>.

Soccer is the world's most popular sport and ever since the Bosman Ruling in 1995 it has become by far the most globalized (Milanovic, 2005). There are foreign players in practically every sanctioned league from Brazil to Belarus, Mexico to Mozambique. Countries that are traditional powerhouses at the international level have foreign players in their domestic leagues, domestic leagues in countries that have only just become recognized as countries bring in foreign players, and even countries with drastic protectionist economic policies bring in foreigners to play the beautiful game on their home turf. Compared to many types of laborers, soccer players have nearly no bounds when it comes to moving freely throughout the world market (Milanovic, 2005). This is why soccer provides such good examples of diverse teams and because of the sport's measurable results, it gives us an interesting look into how the composition of a team is managed in order to achieve the best results.

The MLS was established as the result of the United States hosting the 1994 World Cup because FIFA (the Fédération Internationale de Football Association), soccer's international governing body, requires host nations to have a top domestic league (Twomey and Monks, 2011). The MLS was founded in 1995 and had its inaugural season in 1996 (Bank, 2017). The league's business plan is set up as a single-entity

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<sup>1</sup> <https://www.fourfourtwo.com/us/features/mls-targeted-allocation-money-american-canadian-players-affect>

business structure, which is much different than any other top league in the world (Bank, 2017). This means that instead of players having a contract with an individual team they have a contract with the league. This results in more balanced spending on players, allows more regulation of rosters, and encourages league development (Twomey and Monks, 2011). Although the United States has been a world power for a while, they are far from it in terms of soccer and are constantly taking steps to close the gap. Because soccer has grown slowly in the United States there has been a long tradition of bringing in foreign players to supplement domestic talent<sup>2</sup>. It started in the early 1900s, when the U.S. was struggling to maintain a domestic league and has persisted to the point in which Major League Soccer now has 184 spots open for international players with no connection to the United States<sup>3</sup>. Although plenty of foreign players are accepted into the MLS, there are league policies that look to balance the levels of demographic diversity by requiring a certain amount of homegrown and domestic players in a team<sup>3</sup>.

In this paper I examine how teams in Major League Soccer have performed in the 2012-2016 seasons in order to study the effect of cultural diversity on team performance. I hypothesize that the more culturally diverse teams are, the better they will perform. Diversity can mean a lot of things like differences in age, race, gender, nationality, and religion. That is why it is important to define diversity in this study and establish a certain measurable unit for it. I measure linguistic differences in order to establish how culturally diverse MLS teams are. Team performance is measured by a team's end of season goal

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<sup>2</sup> In the 1920s the American Soccer League was told by FIFA to stop signing international players that were under contract elsewhere.

[http://www.slate.com/articles/sports/sports\\_nut/2010/06/the\\_secret\\_history\\_of\\_american\\_soccer.html](http://www.slate.com/articles/sports/sports_nut/2010/06/the_secret_history_of_american_soccer.html)

<sup>3</sup> <https://www.mlssoccer.com/league/official-rules/mls-roster-rules-and-regulations>

differential. The data is compiled using both primary sources from the league and secondary websites that archive information on soccer teams.

Diversity is expected to play an important factor in the success of Major League Soccer teams. It is important to look at this issue because showing that a more diverse team has a greater chance of success may encourage the league to keep bringing in players with different skills, which would not only mean a better-quality league (more entertaining), but also greater competitiveness on a world scale. Major League Soccer, as well as U.S. soccer as a whole, is on the rise from a global soccer perspective and having a more diverse domestic league could ultimately lead to higher quality domestic players and financial growth. In business, a firm must continue to adapt to current market conditions. When a rival firm produces new technology, the firm must adapt or fail. In the case of the MLS, bringing in more foreign talent to compete with domestic players could possibly increase not only the quality of the league, but also the domestic talent in the sense that if they do not adapt they will no longer be able to compete.

The rest of this paper proceeds as follows. In the next section, I discuss the previous literature on diversity and team performance, then I outline my theory, followed by methodology and results. A final section concludes this paper.

## **2. Literature Review**

### *2.1 General Literature*

The movement of labor has never been more commonplace nor more scrutinized than it is in today's globalized world. Diversity in the workplace has increased rapidly due to the interconnected global workforce, bringing new skill sets, as well as some conflict, to the workplace. The dynamics of diversity are called "the greatest challenge of the 21st century" (Akhtar *et al.*, 2016, p. 85) and research on them essentially doubles

every five years (Harrison *et al.*, 2007, p. 1199). Researchers in the fields of economics, political science, and sociology have long studied these dynamics, but have yet to uncover many general truths. Since the metrics for diversity are complicated, difficult to establish, and do not lead results that can be applied elsewhere, contextual research on a small scale is required. These individual studies are vital to our understanding of diversity in contextual contexts, but also contribute to the greater literature on the topic that has the possibility to lead to general truths on the topic.

The interest in the dynamics of diversity led to contextual studies on cross-cultural conflict and from that came literature on the relationship between diversity and team performance. Although there is plenty of literature on this topic, the research is yet to provide overwhelming evidence one way or another in favor of cultural diversity. As the research has accumulated, the nature and effects of diversity have remained uncertain (Harrison and Klein, 2007, p. 1223). Studies yielding both positive and negative results exist, however, “a majority of these studies... have reported a nonsignificant, direct relationship between team diversity and performance” (Joshi and Roh, 2009, p. 599). Inconsistencies are rife in the theory and literature on this topic, so even when conclusions are made it is rarely applicable to more general situations.

Terms like diversity and heterogeneity are emphasized as important components of a workplace by today's standards. These terms are often used ambiguously in order to represent a concept that the user does not know but knows will trigger a response. These terms can be purposefully vague even when they are defined in literature. Joshi and Roh (2009), Harrison and Klein (2007), and Knippenberg and Schippers (2007) all attempt to break down the aspects of diversity in meta-analytical reviews of the literature

and each come up with their own specifications. For Joshi and Roh (2009) this means the splitting the conditions of diversity associated with social categorization and the aspects associated with skill-based and informational differences. Harrison and Klein (2007) separate diversity into three categories: separation, variety, and disparity. Knippenberg and Schippers (2007) acknowledge that simplification is important in order to better understand diversity but insist that to best delve into diversity one must focus on moving beyond the study of demographic and functional diversity. All three groups emphasize that the contextual setting is important to take into consideration before defining diversity.

No matter the type, diversity in a team setting comes with certain tradeoffs from a managerial perspective. The variability of diversity's tradeoffs can make it hard to quantify the positive or negative differences diversity has on a team. Brovelli (2012) outlines the simple issues that may arise from diversity, like gestures or word choices being misconstrued. While Haas and Nüesch (2012) provide the sensible argument that "multinational teams may have access to a greater variety of task-relevant expertise, which should increase the team performance" (p. 3105). Additionally, Ben-ner *et al.* (2017) suggest that "diversity adds flexibility to a team: someone may come up with an idea that others do not have" (p. 559). While logical arguments for and against the idea of diverse teams seem to be very straightforward, studies yield few consistent results to back them up, which suggests that there is either nothing logical about diversity (unlikely) or previous studies have not done enough to link logic to context.

Studying specific teams and measurements of diversity and linking them to logical empirical frameworks is very important to the development of literature on the

dynamics of diversity as a whole. Knippenberg and Schippers (2007) assert that contextualized diversity goes beyond demographic or functional distinctions insisting that some ambiguity can be good. This starts with choosing a concept of diversity that can occupy more than just a contextual meaning. Harrison and Klein (2007) say, “the experiences of someone who is different from all the others in the team will be radically changed depending on the unit context” (p. 1223). Context matters not just for diversity, but also for a unit of measure like performance.

## *2.2 Soccer Literature*

There are few better examples of diverse work environments than professional soccer teams and the sport itself is ideal for capturing measurements of team performance. As a result, there have been a variety of studies done delving into the relationship between diversity and team performance on the soccer pitch. Similar to the general literature on this topic, lots of research has only led to weak, inconsistent, as well as negative results (Nüesch, 2009; Haas and Nüesch, 2012; Maderer *et al.*, 2014). Most of the studies on this topic have taken fairly lackadaisical approaches to defining or setting appropriate proxies for diversity. For example, demographic measurements are often used as a proxy for things like cultural diversity. However, these studies typically do a poor job explaining why their measurements are important contributors to cultural diversity, not to mention why their measurements are a more relevant in soccer, and then conclude very general points that make little headway into the subject. For example, in Nüesch’s (2009) paper on the subject he concludes that until the link between specific demographic variables, underlying psychological constructs and processes and team effectiveness is explicitly theorized and empirically verified, we will not be able to find definitive answers in the subject (p. 387). Despite many general conclusions finding no

relationship between demographic diversity and team performance in soccer, they provide hope and suggestions for other studies, but also display the level of care that must be taken in the design.

Professional soccer squads function in similar ways to other multicultural work groups, but the terms by which diversity and performance can have an effect in soccer are often different. Despite the similarities, soccer has some conditions that are specific to the sport and not as common in real life. For example, Maderer *et al.* (2014) indicate that “by signing foreign players, club officials also hope to benefit from the specific strengths of individuals with different cultural backgrounds” (p. 217). In this case the authors are referring to a player’s abilities and style of play, which are often largely affected by the cultural background of players. While this idea is mirrored in the business world, business practices are neither ingrained in children from a young age nor does the culture they grow up in necessarily affect their working behavior.

Additionally, not only is it easier to sign foreign labor in soccer, but it is expected of the management. This creates more demographically diverse teams, allowing for more complicated measurements to be taken. If they are properly measured, demographic variables and team effectiveness are the two most important parts of the study’s design, while underlying psychological factors are contributing factors. Ingersoll *et al.* (2013) give a good example of a study that identifies key factors and clarifies the contributing factors. They indicate that linguistic distance, a measurement of how similar languages are, not only captures the ease in which teammates communicate, but also encapsulates the broader notion that some soccer skills and knowledge sets are culture specific (Ingersoll *et al.*, 2013, p. 13). Being able to capture demographic measurements of

diversity as well as cultural ones using a measurable statistic that is relevant to soccer is extremely important in order to outline how the diversity of teams is actually being measured.

Whether you are part of a team working to solve global pandemics or part of a team looking to kick a round ball in between two posts, you have certain skills, knowledge, or experience that you contribute to your team in order to problem solve. These contributions are called human capital and provide a certain measure of value to a person's actions. Brovelli (2012) says, "where we were born and grew up greatly influences our 'assets' in reference to the meaningful contributions we make as human capital" (p. 58). A doctor that is from a rural area may know the best way to administer medical care to a rural population in the case of a breakout of an infectious disease because they have experienced something similar. Furthermore, a Brazilian soccer player may be more comfortable dribbling around a player because of their technical skills that are typical of the Brazilian style of play. The effects of an individual's human capital on team performance are key, especially in soccer. As Ingersoll *et al.* (2013) explain, "style of play, defensive tactics, strategies for set pieces, and even the organization of players on the field differ remarkably across countries" (p. 8). These things are what contribute to a player's human capital in soccer, so it makes sense that an individual player's cultural and demographic attributes are important when analyzing a team's overall levels of diversity.

The globalization of soccer has made it easier to sign foreign labor in soccer, but also made it necessary from a management point of view. More diverse teams have come as a result of this and so have questions about whether it benefits teams. While measures

of performance are plentiful in soccer, measurements of cultural diversity can vary. A measurement must capture the team's basic demographic differences, but also the underlying psychological factors. With cultural diversity as the key measure in this study, an incorrect proxy could render the study meaningless. Haas and Nüesch (2012) indicate that some researchers find "a team member's nationality as a less job-related but more relational attribute that complicates mutual interaction and cooperation" (p. 3107). This idea prefaces the argument that nationality can be a proxy for cultural diversity because it represents how well teammates communicate, as well as interact. This same idea finds itself used by Ingersoll *et al.* (2013) whose proxy for cultural diversity also looks to represent the main factors as well as underlying ones. They indicate that linguistic distance, a measurement of how similar languages are, not only captures the ease in which teammates communicate, but also the broader notion that some soccer skills and knowledge sets are culture specific (Ingersoll *et al.*, 2013, p. 13). The language proxy is able to capture underlying cultural measures, like nationality does, but does a better job representing the demographic measures used to assess the communication abilities between teammates.

### **3. Theory**

This paper examines the relationship between a team's performance and the cultural diversity of its members. Based on previous empirical theories of team performance and multinational teams, I outline a clear hypothesis about the influence that cultural diversity has on team performance.

#### *3.1 Theoretical Framework*

The underlying belief of every study on this topic is that heterogeneous teams operate differently than homogenous teams. The question becomes more complicated

when the results of their work are put into question. When the debate is over culturally homogenous and heterogeneous teams then it becomes even more complicated. Nüesch (2009) exemplifies the headstrong arguments often made when he says, “diversity nurtures conflict and turnover and decreases social identification, cohesion, and performance.” The other side of the argument, that van Knippenberg and Schippers (2007) point out, has “the notion that diverse groups are likely to possess a broader range of task-relevant knowledge, skills, and abilities, and members with different opinions and perspectives.” Many scholars have examined the theoretical underpinnings of performance in multinational teams, and whether or not they found positive, negative, or no effects, almost all of them emphasize the importance of communication and varied skill sets in their theory.

Almost all scholars agree that “the influence of diversity on team performance depends on the nature of the underlying task” (Ingersoll *et al.*, 2013). In this case performing well in soccer is the task and cultural diversity is the specified measure of diversity. The basic findings on homogenous and heterogeneous teams is applicable to soccer in many ways and opens doors for new studies. The debate over how to measure diversity is especially complicated when observing soccer teams because there are so many factors that come into play with such a globalized sport. Ultimately, cultural diversity is used rather than demographic diversity because “in professional soccer intra-group status depends more on individual field performances than on demographic attributes” (Nüesch, 2009).

In order to empirically apply my theoretical framework, I administer a proxy for cultural diversity. My specification of linguistic differences as a measure of cultural

diversity was developed from Ingersoll *et al.* (2013) who argue for their own linguistic measurement by saying, “besides the obvious aspect of ease of communication, this measure captures the broader notion that some skills and knowledge sets are culture specific”. Haas and Nüesch (2013) as well as Maderer *et al.* (2014) use nationality as their measurement of cultural heterogeneity in similar studies. Unfortunately, nationality, though slightly better at estimating intangible aspects like inherent cultural skill sets, fails to fully estimate the levels of communication between team members since there are large amounts of linguistic overlap. The study by Haas and Nüesch (2013) goes as far to say that “language may play a secondary role, because team task in professional soccer requires little verbal communication.” Most people that have played or coached soccer would disagree with this statement wholeheartedly and Anthony Strudwick<sup>4</sup>, author of *Soccer Science*, supports this when he says, “teams in which players often communicate positive and supportive messages to each other are likely to be more successful than teams in which players communicate less in this way.”

The importance of a measurement that estimates communication levels, while still representing culturally inherent skills is extremely important for this study. However, there are also limitations to linguistic differences as a measure of communication and cultural skill sets, like multilingual players and players that grew up playing soccer in a country different from their birth nation. Additionally, there is the common case in which players from different countries speak the same first language, therefore not completely capturing a player’s culturally inherent skills. Although this is true, languages have been forced upon hundreds of different nations over the past two centuries through

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<sup>4</sup> Anthony “Tony” Strudwick is Manchester United’s Head of Performance and has a PhD in sports science.

colonization, and with language came many other cultural impositions (Shakib, 2011). I would argue that even though France and Senegal are on different continents, their soccer players are more likely to share culturally inherent skills than two players from countries that do not share the same official languages. The limitations mentioned are something that comes with studying a more ambiguous topic like cultural diversity. Previously mentioned academics, that have made a large impact on the study of multinational teams and performance, also use estimations to measure cultural diversity, like assigning a player's nationality by their political citizenship. Having a proxy measure for something more abstract like cultural diversity is the closest I can get to measuring its effects.

Language as a measurement of diversity is a more recent addition by academics studying heterogeneous teams and all of studies on this topic that look at professional soccer measure the diversity of European Leagues. In line with the positive perspective on multinational teams when using language in the measurement of cultural diversity, I conjecture:

Null Hypothesis: Cultural diversity has no effect on team performance, *ceteris paribus*

$$H_0 : \beta_2 = 0$$

Alternative Hypothesis: Cultural diversity increases team performance, *ceteris paribus*

$$H_A : \beta_2 > 0$$

## 4. Methodology

### 4.1 Sample and data collection

To discover if cultural diversity is a determinant of team performance, the locale of the test is extremely important. In this case, the professional soccer league in United

States, Major League Soccer (MLS), is a fitting place to test our theory. The competition format has been constant over the last five years, and the teams are relatively unchanging with two teams joining and one team folding over that period. The teams that have existed for all five years are the *Chicago Fire*, *Columbus Crew*, *Colorado Rapids*, *FC Dallas*, *DC United*, *Houston Dynamo*, *Sporting Kansas City*, *Los Angeles Galaxy*, *Montreal Impact*, *New England Revolution*, *New York Red Bulls*, *Philadelphia Union*, *Portland Timbers*, *Real Salt Lake*, *Seattle Sounders*, *San Jose Earthquakes*, *Toronto FC*, and the *Vancouver Whitecaps*. After participating in the 2012, 2013, and 2014 seasons *Chivas USA* folded and starting in the 2015 season *New York City FC* and *Orlando City SC* joined the league. Between the 2012 and 2016 seasons the money spent per season almost doubled while the league went from 19 to 20 teams.

My dataset for this study uses archival data containing information on every team and player to get paid to play for a Major League Soccer team between 2012 and 2016. This information includes end-of-season results, rosters, salaries, countries of birth, and more. I exclude game results from the league's playoffs to assure that every team has played the same number of games. This study only covers a five-year period because of the lack of comprehensive and reliable public data on American soccer. However, the timeline of the dataset still provides good variation in levels of cultural diversity and team performance.

Major League Soccer was chosen as the focus of this study in a large part because of its single entity business structure, which essentially allows the league to oversee and authorize the actions of each individual team. The league has used its central authority to implement regulatory actions that level the financial and competitive playing fields,

which creates an extremely controlled environment in which teams may function. In the five seasons that I observed from 2012 to 2016, nineteen of the twenty-one total teams to play in the MLS over that period made the playoffs at least once. Since this unique system has led to a more equitable spread of finances between teams as well as a more equal field of competition, team performance has the opportunity to be more affected by things other than money.

All of the data that I have accumulated for the paper is from reputable sources and includes both primary and secondary sources. I obtained data on player salaries, team value, and team rosters from the website <https://github.com/>, a provider of open-source datasets. However, the original source of the data on GitHub is from the Major League Soccer Player's Association<sup>5</sup>, which annually releases detailed salary information on every player for every team in the league. The information on each team's results and goal differential comes directly from Major League Soccer<sup>6</sup>. The data on players' countries of birth comes from [transfermarkt.com](http://transfermarkt.com), a web-based archive of soccer players and teams. Finally, the information on different countries' official language or most spoken language (in the case of countries with multiple or no official languages) comes from the Central Intelligence Agency's *The World Factbook*<sup>7</sup>. There are 21 unique teams in this study over the five-season period from 2012-2016 and observations for each individual team and their performance in that given season. Overall, there are 97

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<sup>5</sup> <https://mlsplayers.org/>

<sup>6</sup> <https://www.mlssoccer.com/>

<sup>7</sup> <https://www.cia.gov/library/publications/the-world-factbook/>

observations in the dataset because 3 of the teams included did not participate in all 5 seasons.

#### *4.2 Dependent variable: Team performance during a single season of Major League Soccer*

Team performance can mean a lot of different things in soccer because there are so many aspects that may contribute to a team's success or defeat. A team's performance could come down to something as unquantifiable as pressure or something as unlucky as the wrong call. With soccer games typically being close affairs and goals being hard to come by, the ideal measure of a soccer team's performance is goal differential. Goal differential is calculated by taking the amount of goals that a team scored and subtracting it by how many goals that the team conceded. The reason that goal differential is the main variable in this study is because it offers the most precise measurement of a team's actions offensively in respect to its defensive actions, making it the best comprehensive measurement of team performance. Using each team's end of the season goal differential makes more sense than using the average goal difference per game because it is more likely to represent the actions of the greater majority of the team rather than just those who played in a specific game.

#### *4.3 Independent Variable: Cultural diversity*

Teams are constructed so that people can work together to complete a task. A team's ability to communicate is key to its cohesion, but its expansive skill set is important in order for it to problem solve. Unlike nationality or other measures of cultural differences, linguistic differences more accurately measures the aforementioned trade-off that teams face. This is why linguistic differences, the count of different first languages spoken per team, is our proxy for cultural diversity. The measure of linguistic differences

manages to weigh the capacity of communication while taking into account skills that are culturally ingrained in a player.

#### *4.4 Control Variable: Team Value*

An important issue that has arisen in previous similar studies is that certain metropolitan cities and wealthier teams may be able to bring in the better players, regardless of where they come from. If this were true, there could be a positively biased relationship between team diversity and performance.

The research strategy was designed to mitigate against this concern by narrowing analysis to a single league that uniquely operates as a single entity business. As previously mentioned the MLS attempts to operate with the utmost parity when it comes to both player and monetary allocation. Since the club owners are all partners in the league, most of the revenue produced belongs to the league who then allocates it accordingly, so no team is significantly richer than another, unlike in Europe. In an effort to keep all the teams relatively competitive the MLS allocates a certain number of international roster spots to each team. But before a team can even sign an expensive foreign player there is an order in which teams' have the allocation rights to new players. The allocation list applies to all foreign players coming into the MLS on a transfer fee of at least \$500,000. Major League Soccer determines the allocation order by reversing the previous year's standings at the end of each season, including playoffs, and expansion teams are automatically placed at the top. Teams can trade both allocated international roster spots and allocation rights as well as pass on either in whatever way they see fit. Once a team uses their designated allocation they drop to the bottom of the list. Neither metropolitan nor richer teams necessarily have a clear advantage in bringing in high end foreign players. The MLS provides one of the best examples in the world for this study

because of how well it mitigates the concern of biased relationships. Still, each team's financial capabilities were collected to ensure our analysis is not at risk of omitted variable bias. Data on each individual player's guaranteed salary (base salary plus signing and guaranteed bonuses) was used to calculate each team's total player salaries. Each team's total player salaries are what is then used to calculate the percent that each team spends in comparison to the money spent by the league as a whole. This relative spend, the percentage each team spends relative to the total spend of the league, is the best possible measurement of team value because it accounts for inflation of the U.S. dollar and any new influx of money into Major League Soccer.

Table 1 provides descriptive statistics on the summary statistics of the key variables used in the analysis, while Table 2 shows their bivariate correlations. Cultural diversity and team performance, respectively measured by languages spoken and goal difference, do not appear to be correlated. Although cultural diversity has a significant p-value in the regression, its correlation with team value is somewhat weak at 0.22. Notably, *Dallas* has a very low team value at 0.025 (meaning they spent 2.5% of the entire league's spending on salaries) while *New York Red Bulls* had a very high team value of 0.169 (meaning they spent 16.9% of the entire league's spending on salaries). This variation in the data likely has to do with the low correlation between the two variables.

**Table 1**  
**Summary Statistics**

Variable	Obs	Mean	Std.	Min	Max
GoalDifference	97	0	13.38298	-37	32
TeamValue	97	0.0515258	0.0313229	0.025	0.169
LanguagesSpoken	97	4.762887	1.484456	2	9

**Table 2**  
**Bivariate Correlations of Key Variables**

	GoalDifference	PercentTeamSpend	LanguagesSpoken
GoalDifference	1.0000	...	...
PercentTeamSpend	0.2226	1.0000	...
LanguagesSpoken	0.0855	0.2312	1.0000

## 5. Results and Analysis

The presented model will show the relationship between monetary and cultural variables with respect to a team's performance. I estimate the following equation:

$$GoalDifference_{it} = \beta_0 + \beta_1 Value_{it} + \beta_2 LinguisticDifferences_{it} + \epsilon_{it}$$

where  $GoalDifference_{it}$  is our measure of team performance and is defined as the total goals that team  $i$  scored minus the total goals it conceded in year  $t$ ;  $Value_{it}$  is the spending ability of team  $i$  compared to the rest of the league in year  $t$ ;  $LinguisticDifferences_{it}$  is our parameter of cultural diversity, the count of different first languages spoken on team  $i$  in year  $t$ ; and  $\epsilon_{it}$  is the error term.

The method I used to regress goal differential, our measurement of team performance, on linguistic differences, our measurement of cultural diversity, is Ordinary Least Squares (OLS). The study focuses on the bivariate relationship and then controls for a team's spending ability as a percentage of the league's total spending. In this model I use fixed effects and by using a fixed effects regression I can make sense of any within-group variation over time. Since I am dealing with five years of data, I use year fixed effects to address any season-specific trends that might be associated with both cultural diversity and team performance.

I employ a Huber-White Robust standard errors to address heteroscedasticity in my results. All of the errors are clustered at a team level, and yearly changes in their levels of diversity are not considered to be of independent origins.

My model regresses goal difference on linguistic differences using year dummy variables. The results of this regression include a large p-value at 0.691 and a low t-stat for linguistic difference (LanguagesSpoken), giving me reason to fail to reject the null hypothesis ( $H_0$ ). Since there is no indication that cultural diversity, measured by number of first languages spoken on a team, has an effect on a team's performance, represented by goal differential, I looked into other explanations.

**Table 3**  
**OLS Regression**

<b>PointAccumulation</b>	<b>Coef.</b>	<b>P&gt; t </b>
PercentTeamSpend	91.55	0.041 *
LanguagesSpoken	-0.52	0.691

\* indicates significance (when p-value < .05) Note: The regression results produced an n of 97 and an R-squared of 0.0386

With my independent variable not significant I looked towards my control variable for an explanation. Unfortunately, my attempt to mitigate the effects of richer clubs by examining the MLS did not prove to be as effective as I hoped. Team value, represented by a team's spending ability as a percent of total league spend, does have an effect goal differential. With a p-value of 0.041 and a t-stat of 2.07, team value proved to be statistically significant. I found that for every one percent change in a team's yearly proportional spend their goal difference (*GoalDifference*) increases by 0.92. Although the r-squared is small, and some error can be assumed, this is often the case when a study involves humans because of the difficulty predicting their actions. Previous similar studies by Ben-ner *et al.* (2017) and Maderer *et al.* (2014), also had small r-squared statistics, with theirs being closer to 1.0. It is not at all surprising that the teams who spend more cash will perform better overall. Ingersoll *et al.* (2013) emphasize that a team's value largely depends on "its stock of competencies, knowledge, social and personal attributes, embodied in the ability to produce output." This essentially means that a team's value is determined by the quality of players on it and higher quality players, typically, perform better and increase the team's value. The circular notion of

this argument indicates that while I may not have found a connection between cultural diversity and team performance all three variables are still empirically tied together.

In addition to checking for heteroscedasticity, I completed tests to check for multicollinearity and omitted variable bias in my model. The point of testing for multicollinearity is to ensure that there are no inefficiencies in my estimates and using High Variance Inflation Factors (VIFs) I am able to confirm that there is a low likelihood of multicollinearity in my model. Omitted variables can have anywhere from no to significant effects on parameters, so it is best to test for them in order to know the most about your results. I used the Ramsey RESET test to check for serious specification error, in this case likely omitted variable, and found that there is a good chance that there is specification error. There is not nearly enough public data on the teams or players in Major League Soccer, so it is likely I do not have access to the variable. However, since I am measuring something that is metrically obscure, cultural diversity, there may also be omitted variables that are inherently unobservable. Overall, the OLS regression had some problems with omitted variables, but was not troubled by multicollinearity or heteroscedasticity.

## **6. Conclusion**

The United States of America is a nation that has long been culturally diverse, but recently instead of celebrating our differences the nation's leaders and some of the public have gone on to disparage those who do not look or act like themselves<sup>8</sup>. After years of progress towards a more accepting and equal society, diversity seems to no longer be a good thing. There must be a shift back towards pushing acceptance and equality. One

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<sup>8</sup> <https://www.nytimes.com/2018/02/22/us/uscis-nation-of-immigrants.html>

place that should be looked at as an example of how different persons and groups successfully function is the business world. Although it is true that cultural diversity in the workplace sometimes causes confusion, conflict, and other difficulties because of lingual and cultural differences, there are upsides too (Akhtar *et al.*, 2016). Diversity of skill, ideas, and experience is commonly considered valuable and sought out by employers (Akhtar *et al.*, 2016). It is important to keep studying diversity in the workplace because previous studies on this topic have produced a variety of loose conclusions due to recurring issues such as difficulty determining measurements of performance and the fact that diverse workers tend to choose to work at more successful organizations.

In this paper, I examine cultural diversity in the workplace in a setting that helps control for previous issues in this area of research. With 265 million people playing soccer around the world, the sport encompasses all types of diversity<sup>9</sup>. With its wide reach and cultural ties, professional soccer is an excellent place to study cultural diversity in the workplace. Every professional soccer team is driven by the same pursuit of goals and determination not to concede them (Ingersoll *et al.*, 2013). Within professional teams, players from all ends of the earth join together to pursue this task. Major League Soccer is a microcosm of the business workplace, but since it has the unique ability to control team quality and spending, cultural diversity can be studied more effectively in this environment.

Whether cultural diversity has an effect on team performance in a professional soccer league is a question that truly probes into the depths of team dynamics. Others

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<sup>9</sup> [https://www.fifa.com/mm/document/fifafacts/bcoffsurv/emaga\\_9384\\_10704.pdf](https://www.fifa.com/mm/document/fifafacts/bcoffsurv/emaga_9384_10704.pdf)

have answered this question in other countries using different proxy variables to measure diversity. Whether or not linguistic differences, the count of first languages spoken on a team, have an effect on a team's performance in Major League Soccer is a unique question. Unfortunately, the lack of available data on MLS teams and players limits how much we can take away from this study. What I did confirm is that even in the MLS, a league that has more central power over team finances and level playing fields than most leagues in the world, money has a significant part to play in the performance of teams.

While exploring the question of cultural diversity in soccer, I found that Major League Soccer's single entity business structure naturally helps control for many of the variables that have sometimes thrown off other studies on this subject in other leagues. As cash-rich teams run riot in European soccer, making a farce of Financial Fair Play<sup>10</sup>, the MLS continues to look unbelievably balanced in comparison. I would suggest that as more data becomes available future researchers should take a particular interest in Major League Soccer as a case study in cultural diversity in teams. Although my results using language as a measure of cultural diversity were insignificant, the introduction of lingual statistics as a proxy for cultural diversity by Ingersoll *et al.* (2013) is important for future studies. Lingual statistics provide a more accurate measurement of communication levels between teammates, which has become exceedingly important in a globalized soccer market.

While cultural diversity has no impact on goal differential in this study, MLS teams can take heart in the fact that if they spend more in comparison to the rest of the league, they will be rewarded with a better goal differential tally at the end of the season.

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<sup>10</sup> Financial Fair Play was implemented by the Union of European Football Associations (UEFA) in order to "bring 'discipline and rationality' to European football club finances." (Peeters and Szymanski, 2014).

This study shows that spending can massively affect the regular season standings. If one team has 16% of the league's spending power while another team has 2%, it could potentially be the difference of thirteen goals between the two teams, easily boosting one team over the other in the standings. This reveals that despite Major League Soccer having a more even the playing field than other leagues, money is extremely important for team success. More worryingly in the big picture of global soccer, if the heavily regulated MLS cannot keep money from having a large impact on the game, then is it is virtually impossible for poorer teams to be successful? Luckily, in 2015 Leicester City F.C. showed the world that even in the era of financially dominant soccer teams, money is not the *only* thing that influences a team's performance<sup>11</sup>. Since money has become an increasingly powerful tool in soccer, I think that an interesting area for researchers to study would be the effects that, the previously mentioned, Financial Fair Play has had on teams that are in UEFA's jurisdiction. This could manifest itself as a study of Europe's richest teams' performances or as a case study of different sized teams in a certain league or country. Regarding cultural diversity, researchers should look to study the effects that it has on team performance outside of Europe's top leagues. Whether they are smaller leagues in Europe or on a different continent altogether, the more research done in new places will provide more insight into the future of the world's game.

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<sup>11</sup> In 2015 Leicester City F.C. won the Premier League while placing 15th (out of 20) on the list of highest wages (salaries) in the league. <https://www.theguardian.com/football/2017/jun/01/premier-league-finances-club-by-club>

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